



Product designation

Power contactor

Product type designation

BG09

Contact characteristics

Number of poles	Nr.	3
Rated insulation voltage U_i IEC/EN	V	690
Rated impulse withstand voltage U_{imp}	kV	6
Operational frequency	min Hz	25
	max Hz	400
IEC Conventional free air thermal current I_{th}	A	20
Operational current I_e	AC-1 ($\leq 40^\circ\text{C}$)	A 20
	AC-1 ($\leq 55^\circ\text{C}$)	A 18
	AC-1 ($\leq 70^\circ\text{C}$)	A 15
	AC-3 ($\leq 440\text{V } \leq 55^\circ\text{C}$)	A 9
	AC-4 (400V)	A 4
Rated operational power AC-3 ($T \leq 55^\circ\text{C}$)	230V kW	2.2
	400V kW	4
	415V kW	4.3
	440V kW	4.5
	500V kW	5
	690V kW	5
Rated operational power AC-1 ($T \leq 40^\circ\text{C}$)	230V kW	8
	400V kW	14
	500V kW	16
	690V kW	22
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 1 poles in series	$\leq 24\text{V}$ A	12
	48V A	10
	75V A	4
	110V A	3
	220V A	—
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 2 poles in series	$\leq 24\text{V}$ A	15
	48V A	14
	75V A	9
	110V A	8
	220V A	—
IEC max current I_e in DC1 with $L/R \leq 1\text{ms}$ with 3 poles in series	$\leq 24\text{V}$ A	16
	48V A	16
	75V A	10
	110V A	10

	220V	A	2
IEC max current I _e in DC1 with L/R ≤ 1ms with 4 poles in series			
	≤24V	A	16
	48V	A	16
	75V	A	10
	110V	A	10
	220V	A	2
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 1 poles in series			
	≤24V	A	7
	48V	A	6
	75V	A	2
	110V	A	1
	220V	A	–
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 2 poles in series			
	≤24V	A	8
	48V	A	8
	75V	A	5
	110V	A	4
	220V	A	–
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 3 poles in series			
	≤24V	A	10
	48V	A	10
	75V	A	6
	110V	A	5
	220V	A	0,8
IEC max current I _e in DC3-DC5 with L/R ≤ 15ms with 4 poles in series			
	≤24V	A	10
	48V	A	10
	75V	A	6
	110V	A	5
	220V	A	0,8
Short-time allowable current for 10s (IEC/EN60947-1)		A	96
Protection fuse			
	gG (IEC)	A	20
	aM (IEC)	A	10
Making capacity (RMS value)		A	92
Breaking capacity at voltage			
	440V	A	72
	500V	A	72
	690V	A	72
Resistance per pole (average value)		mΩ	10
Power dissipation per pole (average value)			
	I _{th}	W	4
	AC-3	W	0.81
Tightening torque for terminals			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	9
	max	I _{bin}	9
Tightening torque for coil terminal			
	min	Nm	0.8
	max	Nm	1
	min	I _{bin}	9

		max	I _{bin}	9
Max number of wires simultaneously connectable			Nr.	2
Conductor section	AWG/Kcmil			
		max		12
Flexible w/o lug conductor section		min	mm ²	0.75
		max	mm ²	2.5
Flexible c/w lug conductor section		min	mm ²	1.5
		max	mm ²	2.5
Flexible with insulated spade lug conductor section		min	mm ²	1.5
		max	mm ²	2.5
Power terminal protection according to IEC/EN 60529				IP20 when properly wired

Mechanical features

Operating position	normal allowable	Vertical plan ±30°
Fixing		Screw / DIN rail 35mm
Weight	g	220

Conductor section	AWG/kcmil conductor section	max	12
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Auxiliary contact characteristics

Thermal current I _{th}	A	10
IEC/EN 60947-5-1 designation	A600 - Q600	
Operating current AC15	230V	A 3
	400V	A 1.9
	500V	A 1.4
Operating current DC12	110V	A 2.9
Operating current DC13	24V	A 2.9
	48V	A 1.4
	60V	A 1.2
	110V	A 0.6
	125V	A 0.55
	220V	A 0.3
	600V	A 0.1

Operations

Mechanical life	cycles	20000000
Electrical life	cycles	500000

Safety related data

Performance level B10d according to EN/ISO 13489-1	rated load	cycles	500000
	mechanical load	cycles	20000000
Mirror contacts according to IEC/EN 60947-4-1			yes
EMC compatibility			yes

DC coil operating

DC rated control voltage		V	24
DC operating voltage			
pick-up	min	%Us	75
	max	%Us	115
drop-out	min	%Us	10
	max	%Us	25
Average coil consumption $\leq 20^{\circ}\text{C}$			
	in-rush	W	3.2
	holding	W	3.2
Max cycles frequency			
Mechanical operation		cycles/h	3600
Operating times			
Average time for Us control			
in AC	Closing NO	min	ms 12
		max	ms 21
	Opening NO	min	ms 9
		max	ms 18
	Closing NC	min	ms 17
		max	ms 26
	Opening NC	min	ms 7
		max	ms 17
in DC	Closing NO	min	ms 18
		max	ms 25
	Opening NO	min	ms 2
		max	ms 3
	Closing NC	min	ms 3
		max	ms 5
	Opening NC	min	ms 11
		max	ms 17
UL technical data			
Full-load current (FLA) for three-phase AC motor			
	at 480V	A	7.6
	at 600V	A	6.1
Yielded mechanical performance			
for single-phase AC motor			
	110/120V	HP	0.5
	230V	HP	1.5
for three-phase AC motor			
	200/208V	HP	2
	220/230V	HP	3
	460/480V	HP	5
	575/600V	HP	5

General USE

Contactor

AC current A 20

Short-circuit protection fuse, 600V

High fault

Short circuit current kA 100
Fuse rating A 30
Fuse class J

Standard fault

Short circuit current kA 5
Fuse rating A 30
Fuse class RK5

Contact rating of auxiliary contacts according to UL

A600 - Q600

Ambient conditions

Temperature

Operating temperature

min °C -50
max °C +70

Storage temperature

min °C -60
max °C +80

Max altitude

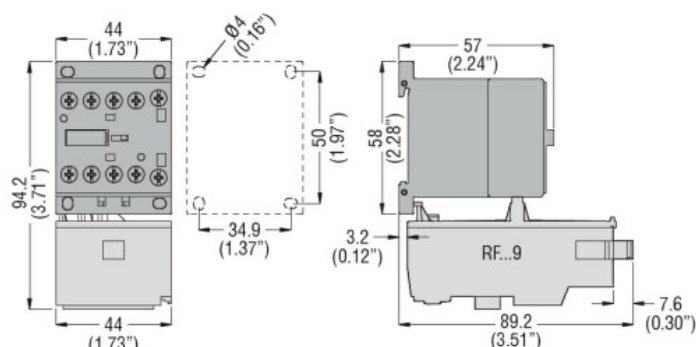
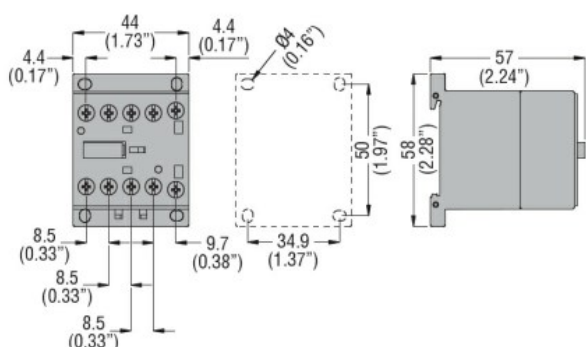
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Resistance & Protection

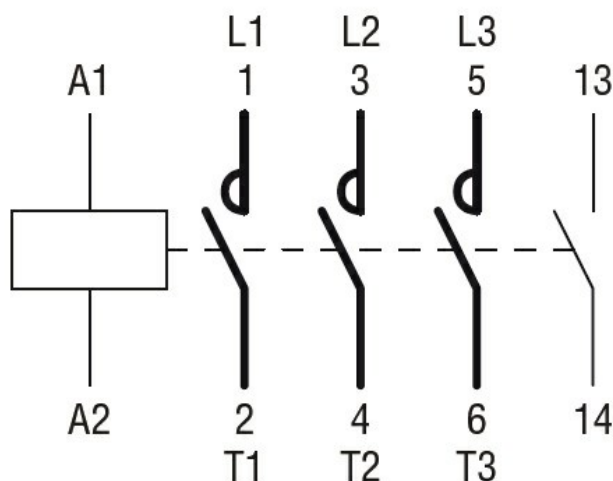
Pollution degree

3

Dimensions



Wiring diagrams



Certifications and compliance

Compliance

CSA C22.2 n° 60947-1

CSA C22.2 n° 60947-4-1

IEC/EN 60947-1

IEC/EN 60947-4-1

UL 60947-1

UL 60947-4-1

Certificates

CCC

cULus

EAC

ETIM classification

ETIM 8.0

EC000066 -
Power contactor,
AC switching